

EAST Search History

| Ref # | Hits | Search Query | DBs | Default Operator | Plurals | Time Stamp |
|----------|------|--|--|------------------|---------|------------------|
| S22 4 | 5 | (barrier and Sn\$1Ag\$1Cu and reflow\$3).clm. | US-PGPUB | OR | ON | 2008/01/21 18:39 |
| S22 3 | 1 | (reaction and barrier and Sn\$1Ag\$1Cu and reflow\$3).clm. | US-PGPUB | OR | ON | 2008/01/21 18:39 |
| S22 2 | 2 | (reaction and barrier and solder\$3 and reflow\$3).clm. | US-PGPUB | OR | ON | 2008/01/21 18:39 |
| S22 1 | 1 | (reaction and barrier and solder\$3 and Sn\$1Ag\$1Cu and reflow\$3).clm. | US-PGPUB | OR | ON | 2008/01/21 18:38 |
| S22 0 | 3 | (adhesion and solder\$3 and Sn\$1Ag\$1Cu and reflow\$3).clm. | US-PGPUB | OR | ON | 2008/01/21 18:38 |
| S21 9 | 34 | ((method or process) and solder\$3 and Sn\$1Ag\$1Cu and reflow\$3).clm. | US-PGPUB | OR | ON | 2008/01/21 18:38 |
| S21 8 | 16 | S214 AND Sn\$1Ag\$1Cu with reflow\$3 | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2008/01/21 18:35 |
| S21 7 | 50 | S214 AND Sn\$1Ag\$1Cu | USPAT | OR | ON | 2008/01/21 18:32 |
| S21 6 | 41 | (cap or capping) with layer with (sputtering plating evaporation) and S214 | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2008/01/21 18:26 |
| S21 5 | 19 | (cap or capping) with layer with (sputtering plating evaporation) and S214 | USPAT | OR | ON | 2008/01/21 18:24 |
| S21 4 | 9478 | S210 S211 S212 S213 | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2008/01/21 18:22 |
| S21 3 | 4137 | (438/106).CCLS. | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2008/01/21 18:21 |
| S21 2 | 1674 | (438/123).CCLS. | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2008/01/21 18:21 |

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|----------|------|--|---|----|-----|------------------|
| S21 1 | 1831 | (438/613).CCLS. | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2008/01/21 18:21 |
| S21 0 | 3079 | (438/612).CCLS. | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2008/01/21 18:21 |
| S20 9 | 327 | (438/611).CCLS. | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2008/01/21 18:21 |
| S20 8 | 2 | "6,143,588".pn. | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2008/01/21 17:53 |
| S20 7 | 1 | S206 and copper | USPAT; DERWENT | OR | ON | 2008/01/21 17:53 |
| S20 6 | 2 | (US-7081404-\$).did. or (WO-2004075265-\$).did. | USPAT; DERWENT | OR | ON | 2008/01/21 17:53 |
| S20 5 | 1 | tin near1 "95" near antimony | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2008/01/21 17:53 |
| S20 4 | 1737 | tin near2 bismuth near antimony | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2008/01/21 17:53 |
| S20 3 | 1 | tin near2 bismuth near antimonium | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2008/01/21 17:53 |
| S20 2 | 104 | tin near2 bismuth near eutectic | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2008/01/21 17:53 |

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|----------|---------|---|---|----|----|------------------|
| S20 1 | 128 | tin near2 silver near eutectic | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2008/01/21 17:53 |
| S20 0 | 2 | "20050224966".PN. | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2008/01/21 17:53 |
| S19 9 | 2 | "7081404".PN. | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2008/01/21 17:53 |
| S19 8 | 35 | ("4185318" "4527259" "4554643" "4868632" "5357134" "5408115" "5467308" "5763308" "5768192" "5859459" "5877523" "5923978" "6348387" "6424002" "6563151" "6624465").PN. | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2008/01/21 17:53 |
| S19 7 | 65 | S196 not S195 | USPAT | OR | ON | 2008/01/21 17:53 |
| S19 6 | 96 | solder with wettable with (sputtering plating evaporation) | USPAT | OR | ON | 2008/01/21 17:53 |
| S19 5 | 31 | solder with wettable with (sputtering plating evaporation) and "438"/\$.ccls. | USPAT | OR | ON | 2008/01/21 17:53 |
| S19 4 | 2 | (sn tin) with plating with low with cost and "438"/\$.ccls. | USPAT | OR | ON | 2008/01/21 17:53 |
| S19 3 | 1 | (sn) with plating with low with cost and "438"/\$.ccls. | USPAT | OR | ON | 2008/01/21 17:53 |
| S19 2 | 42 | (gold au) with plating with cost and "438"/\$.ccls. | USPAT | OR | ON | 2008/01/21 17:53 |
| S19 1 | 27 | metal with deposit\$5 with (sputtering plating evaporation) with cost and "438"/\$.ccls. | USPAT | OR | ON | 2008/01/21 17:53 |
| S19 0 | 1414039 | metal deposit\$5 with (sputtering plating evaporation) with cost and "438"/\$.ccls. | USPAT | OR | ON | 2008/01/21 17:53 |
| S18 9 | 2 | metal near2 layer with deposit\$5 with (sputtering plating evaporation) with cost and "438"/\$.ccls. | USPAT | OR | ON | 2008/01/21 17:53 |
| S18 8 | 0 | (ball c4 bump flip solder near2 ball) same metal near2 layer with deposit\$5 with (sputtering plating evaporation) with cost and "438"/\$.ccls. | USPAT | OR | ON | 2008/01/21 17:53 |

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|----------|-----|--|-------|----|----|------------------|
| S18 7 | 5 | (ball c4 bump flip solder near2 ball) same (cap or capping) with layer with (sputtering plating evaporation) and "438"\$.ccls. | USPAT | OR | ON | 2008/01/21 17:53 |
| S18 6 | 350 | (cap or capping) with layer with (sputtering plating evaporation) and "438"\$.ccls. | USPAT | OR | ON | 2008/01/21 17:53 |
| S18 5 | 5 | (cap or capping) with layer with (sputtering plating evaporation) and 257/737.ccls. | USPAT | OR | ON | 2008/01/21 17:53 |
| S18 4 | 860 | (cap or capping) with layer with (sputtering plating evaporation) | USPAT | OR | ON | 2008/01/21 17:53 |
| S18 3 | 1 | "5,234,149".pn. and (cap capping) | USPAT | OR | ON | 2008/01/21 17:53 |
| S18 2 | 1 | "5532612".pn. and anneal\$5 with minutes | USPAT | OR | ON | 2008/01/21 17:53 |
| S18 1 | 1 | "5532612".pn. and anneal\$5 | USPAT | OR | ON | 2008/01/21 17:53 |
| S18 0 | 31 | (bump solder near2 ball) with anneal\$5 and anneal\$5 with (min minutes hour second) | USPAT | OR | ON | 2008/01/21 17:53 |
| S17 9 | 106 | (bump solder near2 ball) with anneal\$5 | USPAT | OR | ON | 2008/01/21 17:53 |
| S17 8 | 11 | (bump solder near2 ball) with anneal\$5 with (min minutes hour second) | USPAT | OR | ON | 2008/01/21 17:53 |
| S17 7 | 2 | (bump solder near2 ball) with anneal\$5 with minutes | USPAT | OR | ON | 2008/01/21 17:53 |
| S17 6 | 4 | wettable with layer with (copper cu) and pure near2 (tin sn) with (bump ball c4) | USPAT | OR | ON | 2008/01/21 17:53 |
| S17 5 | 200 | wettable with layer with (copper cu) | USPAT | OR | ON | 2008/01/21 17:53 |
| S17 4 | 2 | tin with bump same cu with wett\$6 | USPAT | OR | ON | 2008/01/21 17:53 |
| S17 3 | 0 | tin with bump with cu with wettable | USPAT | OR | ON | 2008/01/21 17:53 |
| S17 2 | 1 | "5,234,149".pn. | USPAT | OR | ON | 2008/01/21 17:53 |
| S17 1 | 210 | wettable with (layer film) with (gold au) | USPAT | OR | ON | 2008/01/21 17:53 |
| S17 0 | 2 | final with wettable with (layer film) with (gold au) | USPAT | OR | ON | 2008/01/21 17:53 |
| S16 9 | 58 | bump with plating with seed with layer | USPAT | OR | ON | 2008/01/21 17:53 |
| S16 8 | 64 | bump same (au gold) with wetting | USPAT | OR | ON | 2008/01/21 17:53 |
| S16 7 | 5 | au with bump with plating with seed | USPAT | OR | ON | 2008/01/21 17:53 |

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|----------|-------|---|---|----|-----|------------------|
| S16 6 | 6 | gold with bump with plating with seed | USPAT | OR | ON | 2008/01/21 17:53 |
| S16 5 | 23182 | gold with bump wit plating with seed | USPAT | OR | ON | 2008/01/21 17:53 |
| S16 4 | 12 | barrier with wetting with layer with au | USPAT | OR | ON | 2008/01/21 17:53 |
| S16 3 | 113 | barrier with au with bump | USPAT | OR | ON | 2008/01/21 17:53 |
| S16 2 | 1 | barrier with au with wettab\$5 with bump | USPAT | OR | ON | 2008/01/21 17:53 |
| S16 1 | 35 | S159 and 257/737.ccls. | USPAT | OR | ON | 2008/01/21 17:53 |
| S16 0 | 71 | S159 and 257/737.ccls. | US-PGPUB; USPAT; USOCR | OR | ON | 2008/01/21 17:53 |
| S15 9 | 788 | (BLM UBM) with (ti tin ta tan zr znn v ni) | US-PGPUB; USPAT; USOCR | OR | ON | 2008/01/21 17:53 |
| S15 8 | 10 | (BLM UBM) with adhesion with thickness | US-PGPUB; USPAT; USOCR | OR | ON | 2008/01/21 17:53 |
| S15 7 | 2 | ("20020137325" "6492197").PN. | US-PGPUB; USPAT; USOCR | OR | ON | 2008/01/21 17:53 |
| S15 6 | 47 | "438"/\$.ccls. and (Pb lead) near2 free and (BLM UBM) and sputtering | USPAT | OR | ON | 2008/01/21 17:53 |
| S15 5 | 30 | S154 and (Pb lead) near2 free and (BLM UBM) | USPAT | OR | ON | 2008/01/21 17:53 |
| S15 4 | 2330 | (438/614).CCLS. | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2008/01/21 17:53 |
| S15 3 | 2 | S152 and lead near2 free | USPAT | OR | ON | 2008/01/21 17:53 |
| S15 2 | 8 | ("4835593" "5162257" "5244143" "5767010" "5775569" "5937320" "6003757" "6056191").PN. | USPAT | OR | ON | 2008/01/21 17:53 |
| S15 1 | 2 | "20050224966".pn. | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2008/01/21 17:53 |
| S15 0 | 16 | ("4835593" "5162257" "5244143" "5767010" "5775569" "5937320" "6003757" "6056191").PN. | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2008/01/21 17:53 |

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|----------|-------|---|------------------------------|----|----|------------------|
| S14 9 | 177 | andujar.xp. | USPAT | OR | ON | 2008/01/21 17:53 |
| S14 8 | 184 | (armando with rodriguez).xp. | USPAT | OR | ON | 2008/01/21 17:53 |
| S14 7 | 359 | (armando with rodriguez).xa. | USPAT | OR | ON | 2008/01/21 17:53 |
| S14 6 | 309 | ((flores or ruiz) with delma).xa. | USPAT | OR | ON | 2008/01/21 17:53 |
| S14 5 | 31 | epoxy near1 resin with commonly with used with (reliability moldability, moisture absorbing resistance adhesion) | USPAT | OR | ON | 2008/01/21 17:53 |
| S14 4 | 29 | S143 and "257"\$.ccls. | USPAT | OR | ON | 2008/01/21 17:53 |
| S14 3 | 88 | encapsulat\$3 with epoxy with prefer\$5 | US-PGPUB; USPAT; USOCR | OR | ON | 2008/01/21 17:53 |
| S14 2 | 2664 | S141 and "257"\$.ccls. | USPAT | OR | ON | 2008/01/21 17:53 |
| S14 1 | 11490 | encapsulat\$3 with epoxy | US-PGPUB; USPAT; USOCR | OR | ON | 2008/01/21 17:53 |
| S14 0 | 37 | S139 and "257"\$.ccls. | USPAT | OR | ON | 2008/01/21 17:53 |
| S13 9 | 103 | encapsulat\$3 with epoxy with cost | US-PGPUB; USPAT; USOCR | OR | ON | 2008/01/21 17:53 |
| S13 8 | 34 | S135 and "257"\$.ccls. | USPAT | OR | ON | 2008/01/21 17:53 |
| S13 7 | 59 | S135 and "257"\$.ccls. | US-PGPUB; USPAT; USOCR | OR | ON | 2008/01/21 17:53 |
| S13 6 | 0 | S135 and 257/797.ccls. | US-PGPUB; USPAT; USOCR | OR | ON | 2008/01/21 17:53 |
| S13 5 | 134 | molding with epoxy with cost | US-PGPUB; USPAT; USOCR | OR | ON | 2008/01/21 17:53 |
| S13 4 | 1 | "6114752".pn. | US-PGPUB; USPAT; USOCR | OR | ON | 2008/01/21 17:53 |
| S13 3 | 34 | "6114752" | US-PGPUB; USPAT; USOCR | OR | ON | 2008/01/21 17:53 |
| S13 2 | 12 | ("4884124" "5223740" "5233222" "5264730" "5327008" "5521428" "5550402" "5661338" "5683944" "5723897" "5963782" "6049120").PN. | US-PGPUB; USPAT; USOCR | OR | ON | 2008/01/21 17:53 |

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|----------|-------|---|---|----|-----|------------------|
| S13 1 | 4 | ("5140404" "5491362" "6114752" "6191490").PN. | US-PGPUB; USPAT; USOCR | OR | ON | 2008/01/21 17:53 |
| S13 0 | 35 | ("4258381" "4857989" "5214307").PN. OR ("6114752"). URPN. | US-PGPUB; USPAT; USOCR | OR | ON | 2008/01/21 17:53 |
| S12 9 | 8 | ("5140404" "5491362" "6114752" "6191490").PN. OR ("6440779"). URPN. | US-PGPUB; USPAT; USOCR | OR | ON | 2008/01/21 17:53 |
| S12 8 | 35 | ("4258381" "4857989" "5214307").PN. OR ("6114752"). URPN. | US-PGPUB; USPAT; USOCR | OR | ON | 2008/01/21 17:53 |
| S12 7 | 12 | ("4532222" "5986209" "6114752" "6 424031" "6504238" "6638790").PN. | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2008/01/21 17:53 |
| S12 6 | 171 | S124 and S125 | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2008/01/21 17:53 |
| S12 5 | 10264 | (257/666-677).CCLS. | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2008/01/21 17:53 |
| S12 4 | 2258 | (chip IC die) with pad with ring | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2008/01/21 17:53 |
| S12 3 | 204 | (chip IC die) with pad with rim | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2008/01/21 17:53 |
| S12 2 | 5630 | pad with rim | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2008/01/21 17:53 |
| S12 1 | 11 | S120 not S115 | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2008/01/21 17:53 |

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| S12 0 | 21 | S119 and pad with rim | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2008/01/21 17:53 |
| S11 9 | 10264 | (257/666-677).CCLS. | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2008/01/21 17:53 |
| S11 8 | 309036 | "257"/(666-677).ccls. and pad with rim | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2008/01/21 17:53 |
| S11 7 | 309036 | "257"/(666-677).ccls. and pad with rim | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2008/01/21 17:53 |
| S11 6 | 309036 | "257"/(666-677).ccls. and pad with rim | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2008/01/21 17:53 |
| S11 5 | 10 | S114 and pad with rim | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2008/01/21 17:53 |
| S11 4 | 2706 | (257/676).CCLS. | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2008/01/21 17:53 |
| S11 3 | 1 | "6373127".pn. and tape | US-PGPUB; USPAT; USOCR | OR | ON | 2008/01/21 17:53 |

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| S11 2 | 71 | ("20030073265" "3838984" "4530152" "4707724" "4756080" "4812896" "5041902" "5157480" "5172213" "5172214" "5200362" "5200809" "5214845" "5216278" "5221642" "5258094" "5273938" "5277972" "5278446" "5279029" "5332864" "5336931" "5343076" "5391439" "5406124" "5424576" "5435057" "5521429" "5604376" "5608267" "5639990" "5640047" "5641997" "5646831" "5650663" "5683806" "5696666" "5701034" "5710064" "5736432" "5776798" "5783861" "5835988" "5859471" "5866939" "5877043" "5894108" "5977613" "5977630" "5981314" "6001671" "6018189" "6025640" "6130115" "6130473" "6143981" "6198171" "6225146" "6229200" "6242281" "6281568" "6437429" "6448633" "6483178" "6545332" "6580161" "6611047" "6700189" "6861734").PN. OR ("7042068"). URPN. | US-PGPUB; USPAT; USOCR | OR | ON | 2008/01/21 17:53 |
| S11 1 | 135 | ("5172214" "5521429").PN. OR ("5977613").URPN. | US-PGPUB; USPAT; USOCR | OR | ON | 2008/01/21 17:53 |
| S11 0 | 84 | ("3838984" "4530152" "4707724" "4756080" "4812896" "5041902" "5157480" "5172213" "5172214" "5200362" "5200809" "5214845" "5216278" "5221642" "5258094" "5273938" "5277972" "5278446" "5279029" "5332864" "5336931" "5343076" "5406124" "5424576" "5435057" "5474958" "5521429" "5604376" "5608267" "5639990" "5640047" "5641997" "5646831" "5650663" "5683806" "5696666" "5701034" "5710064" "5776798" "5783861" "5835988" "5859471" "5866939" "5877043" "5894108" "5977613" "5977615" "5977630" "5981314" "6001671" "6025640" "6130115" "6130473" "6143981" "6198171" "6225146" "6229200" "6242281" "6281568").PN. OR ("6455356").URPN. | US-PGPUB; USPAT; USOCR | OR | ON | 2008/01/21 17:53 |
| S10 9 | 65 | ("5270491" "5529959" "5811799" "5898218" "6191359" "6208020" "6303978" "6355502").PN. OR ("6476469").URPN. | US-PGPUB; USPAT; USOCR | OR | ON | 2008/01/21 17:53 |

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|----------|------|---|---|----|----|------------------|
| S10 8 | 25 | ("20010030355" "20010042904" "20020041011" "20020079561" "20020121684" "20020153597" "20030001244" "20030006492" "20030042581" "20030073265" "4283839" "5466966" "6025640" "6075284" "6078098" "6081029" "6166430" "6211462" "6229200" "6448633" "6455356" "6462424" "6476469" "6521987" "6700186"). PN. OR ("6979886").URPN. | US-PGPUB; USPAT; USOCR | OR | ON | 2008/01/21 17:53 |
| S10 7 | 11 | ("0127711" "6504238" "6828661" "6 900524" "6979886").PN. | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2008/01/21 17:53 |
| S10 6 | 2 | "6,143,588".pn. | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2007/09/28 19:01 |
| S10 5 | 1 | S104 and copper | USPAT; DERWENT | OR | ON | 2007/09/28 17:20 |
| S10 4 | 2 | (US-7081404-\$).did. or (WO-2004075265-\$).did. | USPAT; DERWENT | OR | ON | 2007/09/28 17:20 |
| S10 3 | 1 | tin near1 "95" near antimony | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2007/09/28 16:32 |
| S10 2 | 1712 | tin near2 bismuth near antimony | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2007/09/28 16:27 |
| S10 1 | 1 | tin near2 bismuth near antimonium | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2007/09/28 16:25 |
| S10 0 | 99 | tin near2 bismuth near eutectic | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2007/09/28 16:24 |

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| S99 | 121 | tin near2 silver near eutectic | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2007/09/28 16:20 |
| S98 | 2 | "20050224966".PN. | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2007/09/28 16:17 |
| S97 | 2 | "7081404".PN. | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2007/09/28 16:09 |
| S96 | 35 | ("4185318" "4527259" "4554643" "4868632" "5357134" "5408115" "5467308" "5763308" "5768192" "5859459" "5877523" "5923978" "6348387" "6424002" "6563151" "6624465").PN. | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2006/10/30 11:41 |
| S95 | 62 | S94 not S93 | USPAT | OR | ON | 2006/10/28 18:29 |
| S94 | 88 | solder with wettable with (sputtering plating evaporation) | USPAT | OR | ON | 2006/10/28 18:29 |
| S93 | 26 | solder with wettable with (sputtering plating evaporation) and "438"/\$.ccls. | USPAT | OR | ON | 2006/10/28 18:29 |
| S92 | 2 | (sn tin) with plating with low with cost and "438"/\$.ccls. | USPAT | OR | ON | 2006/10/28 18:24 |
| S91 | 1 | (sn) with plating with low with cost and "438"/\$.ccls. | USPAT | OR | ON | 2006/10/28 18:24 |
| S90 | 40 | (gold au) with plating with cost and "438"/\$.ccls. | USPAT | OR | ON | 2006/10/28 18:24 |
| S89 | 22 | metal with deposit\$5 with (sputtering plating evaporation) with cost and "438"/\$.ccls. | USPAT | OR | ON | 2006/10/28 18:22 |
| S88 | 1344965 | metal deposit\$5 with (sputtering plating evaporation) with cost and "438"/\$.ccls. | USPAT | OR | ON | 2006/10/28 18:21 |
| S87 | 1 | metal near2 layer with deposit\$5 with (sputtering plating evaporation) with cost and "438"/\$.ccls. | USPAT | OR | ON | 2006/10/28 18:21 |
| S86 | 0 | (ball c4 bump flip solder near2 ball) same metal near2 layer with deposit\$5 with (sputtering plating evaporation) with cost and "438"/\$.ccls. | USPAT | OR | ON | 2006/10/28 18:20 |

EAST Search History

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|-----|-------|---|-------|----|----|------------------|
| S85 | 4 | (ball c4 bump flip solder near2 ball) same (cap or capping) with layer with (sputtering plating evaporation) and "438"/\$.ccls. | USPAT | OR | ON | 2006/10/28 18:19 |
| S84 | 290 | (cap or capping) with layer with (sputtering plating evaporation) and "438"/\$.ccls. | USPAT | OR | ON | 2006/10/28 18:18 |
| S83 | 5 | (cap or capping) with layer with (sputtering plating evaporation) and 257/737.ccls. | USPAT | OR | ON | 2006/10/28 18:16 |
| S82 | 737 | (cap or capping) with layer with (sputtering plating evaporation) | USPAT | OR | ON | 2006/10/28 18:16 |
| S81 | 1 | "5,234,149".pn. and (cap capping) | USPAT | OR | ON | 2006/10/28 18:15 |
| S80 | 1 | "5532612".pn. and anneal\$5 with minutes | USPAT | OR | ON | 2006/10/28 18:13 |
| S79 | 1 | "5532612".pn. and anneal\$5 | USPAT | OR | ON | 2006/10/28 18:04 |
| S75 | 2 | (bump solder near2 ball) with anneal\$5 with minutes | USPAT | OR | ON | 2006/10/28 18:03 |
| S78 | 29 | (bump solder near2 ball) with anneal\$5 and anneal\$5 with (min minutes hour second) | USPAT | OR | ON | 2006/10/28 17:45 |
| S77 | 94 | (bump solder near2 ball) with anneal\$5 | USPAT | OR | ON | 2006/10/28 17:44 |
| S76 | 10 | (bump solder near2 ball) with anneal\$5 with (min minutes hour second) | USPAT | OR | ON | 2006/10/28 17:44 |
| S74 | 4 | wettable with layer with (copper cu) and pure near2 (tin sn) with (bump ball c4) | USPAT | OR | ON | 2006/10/28 17:40 |
| S73 | 191 | wettable with layer with (copper cu) | USPAT | OR | ON | 2006/10/28 17:06 |
| S72 | 2 | tin with bump same cu with wett\$6 | USPAT | OR | ON | 2006/10/28 17:04 |
| S71 | 0 | tin with bump with cu with wettable | USPAT | OR | ON | 2006/10/28 17:04 |
| S70 | 1 | "5,234,149".pn. | USPAT | OR | ON | 2006/10/28 17:03 |
| S69 | 180 | wettable with (layer film) with (gold au) | USPAT | OR | ON | 2006/10/28 16:09 |
| S68 | 2 | final with wettable with (layer film) with (gold au) | USPAT | OR | ON | 2006/10/28 16:04 |
| S67 | 52 | bump with plating with seed with layer | USPAT | OR | ON | 2006/10/28 16:03 |
| S66 | 54 | bump same (au gold) with wetting | USPAT | OR | ON | 2006/10/28 15:58 |
| S65 | 4 | au with bump with plating with seed | USPAT | OR | ON | 2006/10/28 15:52 |
| S64 | 6 | gold with bump with plating with seed | USPAT | OR | ON | 2006/10/28 15:50 |
| S63 | 21062 | gold with bump wit plating with seed | USPAT | OR | ON | 2006/10/28 15:47 |
| S62 | 12 | barrier with wetting with layer with au | USPAT | OR | ON | 2006/10/28 15:46 |
| S61 | 103 | barrier with au with bump | USPAT | OR | ON | 2006/10/28 15:45 |

EAST Search History

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|-----|------|--|---|----|-----|------------------|
| S60 | 1 | barrier with au with wettab\$5 with bump | USPAT | OR | ON | 2006/10/28 15:43 |
| S59 | 31 | S57 and 257/737.ccls. | USPAT | OR | ON | 2006/10/28 15:41 |
| S58 | 58 | S57 and 257/737.ccls. | US-PGPUB; USPAT; USOCR | OR | ON | 2006/10/28 15:27 |
| S57 | 651 | (BLM UBM) with (ti tin ta tan zr znn v ni) | US-PGPUB; USPAT; USOCR | OR | ON | 2006/10/28 15:26 |
| S56 | 8 | (BLM UBM) with adhesion with thickness | US-PGPUB; USPAT; USOCR | OR | ON | 2006/10/28 15:25 |
| S55 | 2 | ("20020137325" "6492197").PN. | US-PGPUB; USPAT; USOCR | OR | ON | 2006/10/28 15:06 |
| S54 | 29 | "438"/\$.ccls. and (Pb lead) near2 free and (BLM UBM) and sputtering | USPAT | OR | ON | 2006/10/28 13:59 |
| S53 | 24 | S52 and (Pb lead) near2 free and (BLM UBM) | USPAT | OR | ON | 2006/10/28 13:58 |
| S52 | 2223 | (438/614).CCLS. | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2006/10/28 13:54 |
| S51 | 2 | S50 and lead near2 free | USPAT | OR | ON | 2006/10/28 13:54 |
| S50 | 8 | ("4835593" "5162257" "5244143" "5767010" "5775569" "5937320" "6003757" "6056191").PN. | USPAT | OR | ON | 2006/10/28 13:53 |
| S48 | 16 | ("4835593" "5162257" "5244143" "5767010" "5775569" "5937320" "6003757" "6056191").PN. | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2006/10/28 13:52 |
| S49 | 2 | "20050224966".pn. | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2006/10/28 13:23 |
| S47 | 42 | andujar.xp. | USPAT | OR | ON | 2006/10/24 16:14 |
| S46 | 61 | (armando with rodriguez).xp. | USPAT | OR | ON | 2006/10/24 16:11 |
| S45 | 359 | (armando with rodriguez).xa. | USPAT | OR | ON | 2006/10/24 16:11 |
| S44 | 283 | ((flores or ruiz) with delma).xa. | USPAT | OR | ON | 2006/10/24 16:10 |
| S43 | 29 | epoxy near1 resin with commonly with used with (reliability moldability, moisture absorbing resistance adhesion) | USPAT | OR | ON | 2006/10/24 16:10 |
| S39 | 25 | S38 and "257"/\$.ccls. | USPAT | OR | ON | 2006/10/24 15:11 |

EAST Search History

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|-----|-------|---|---|----|----|------------------|
| S38 | 77 | encapsulat\$3 with epoxy with prefer\$5 | US-PGPUB; USPAT; USOCR | OR | ON | 2006/10/24 15:09 |
| S37 | 2386 | S36 and "257"\$.ccls. | USPAT | OR | ON | 2006/10/24 15:09 |
| S36 | 10021 | encapsulat\$3 with epoxy | US-PGPUB; USPAT; USOCR | OR | ON | 2006/10/24 15:08 |
| S35 | 31 | S34 and "257"\$.ccls. | USPAT | OR | ON | 2006/10/24 15:08 |
| S34 | 90 | encapsulat\$3 with epoxy with cost | US-PGPUB; USPAT; USOCR | OR | ON | 2006/10/24 15:08 |
| S33 | 32 | S30 and "257"\$.ccls. | USPAT | OR | ON | 2006/10/24 15:06 |
| S30 | 122 | molding with epoxy with cost | US-PGPUB; USPAT; USOCR | OR | ON | 2006/10/24 15:06 |
| S32 | 48 | S30 and "257"\$.ccls. | US-PGPUB; USPAT; USOCR | OR | ON | 2006/10/24 15:01 |
| S31 | 0 | S30 and 257/797.ccls. | US-PGPUB; USPAT; USOCR | OR | ON | 2006/10/24 15:01 |
| S29 | 1 | "6114752".pn. | US-PGPUB; USPAT; USOCR | OR | ON | 2006/10/24 15:00 |
| S28 | 24 | "6114752" | US-PGPUB; USPAT; USOCR | OR | ON | 2006/10/24 14:53 |
| S27 | 12 | ("4884124" "5223740" "5233222" "5264730" "5327008" "5521428" "5550402" "5661338" "5683944" "5723897" "5963782" "6049120").PN. | US-PGPUB; USPAT; USOCR | OR | ON | 2006/10/24 14:53 |
| S26 | 4 | ("5140404" "5491362" "6114752" "6191490").PN. | US-PGPUB; USPAT; USOCR | OR | ON | 2006/10/24 14:37 |
| S25 | 25 | ("4258381" "4857989" "5214307").PN. OR ("6114752"). URPN. | US-PGPUB; USPAT; USOCR | OR | ON | 2006/10/24 10:46 |
| S24 | 8 | ("5140404" "5491362" "6114752" "6191490").PN. OR ("6440779"). URPN. | US-PGPUB; USPAT; USOCR | OR | ON | 2006/10/24 10:45 |
| S23 | 25 | ("4258381" "4857989" "5214307").PN. OR ("6114752"). URPN. | US-PGPUB; USPAT; USOCR | OR | ON | 2006/10/24 10:43 |
| S22 | 12 | ("4532222" "5986209" "6114752" "6 424031" "6504238" "6638790").PN. | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2006/10/24 10:42 |

EAST Search History

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|-----|--------|--|---|----|-----|------------------|
| S21 | 148 | S19 and S20 | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2006/10/24 10:04 |
| S20 | 9559 | (257/666-677).CCLS. | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2006/10/24 10:04 |
| S19 | 1986 | (chip IC die) with pad with ring | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2006/10/24 10:04 |
| S18 | 182 | (chip IC die) with pad with rim | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2006/10/24 10:04 |
| S17 | 5273 | pad with rim | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2006/10/23 15:05 |
| S16 | 11 | S15 not S10 | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2006/10/23 15:04 |
| S15 | 18 | S14 and pad with rim | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2006/10/23 15:04 |
| S14 | 9553 | (257/666-677).CCLS. | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2006/10/23 15:04 |
| S13 | 282813 | "257"/(666-677).ccls. and pad with rim | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2006/10/23 15:04 |

EAST Search History

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|-----|--------|---|---|----|-----|------------------|
| S12 | 282813 | "257"/(666-677).ccls. and pad with rim | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2006/10/23 15:03 |
| S11 | 282813 | "257"/(666-677).ccls. and pad with rim | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2006/10/23 15:02 |
| S10 | 7 | S8 and pad with rim | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2006/10/23 15:02 |
| S8 | 2477 | (257/676).CCLS. | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2006/10/23 15:00 |
| S7 | 1 | "6373127".pn. and tape | US-PGPUB; USPAT; USOCR | OR | ON | 2006/10/23 14:59 |
| S6 | 69 | ("20030073265" "3838984" "4530152" "4707724" "4756080" "4812896" "5041902" "5157480" "5172213" "5172214" "5200362" "5200809" "5214845" "5216278" "5221642" "5258094" "5273938" "5277972" "5278446" "5279029" "5332864" "5336931" "5343076" "5391439" "5406124" "5424576" "5435057" "5521429" "5604376" "5608267" "5639990" "5640047" "5641997" "5646831" "5650663" "5683806" "5696666" "5701034" "5710064" "5736432" "5776798" "5783861" "5835988" "5859471" "5866939" "5877043" "5894108" "5977613" "5977630" "5981314" "6001671" "6018189" "6025640" "6130115" "6130473" "6143981" "6198171" "6225146" "6229200" "6242281" "6281568" "6437429" "6448633" "6483178" "6545332" "6580161" "6611047" "6700189" "6861734").PN. OR ("7042068"). URPN. | US-PGPUB; USPAT; USOCR | OR | ON | 2006/10/23 14:42 |
| S5 | 116 | ("5172214" "5521429").PN. OR ("5977613").URPN. | US-PGPUB; USPAT; USOCR | OR | ON | 2006/10/23 14:03 |

EAST Search History

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| S4 | 77 | ("3838984" "4530152" "4707724" "4756080" "4812896" "5041902" "5157480" "5172213" "5172214" "5200362" "5200809" "5214845" "5216278" "5221642" "5258094" "5273938" "5277972" "5278446" "5279029" "5332864" "5336931" "5343076" "5406124" "5424576" "5435057" "5474958" "5521429" "5604376" "5608267" "5639990" "5640047" "5641997" "5646831" "5650663" "5683806" "5696666" "5701034" "5710064" "5776798" "5783861" "5835988" "5859471" "5866939" "5877043" "5894108" "5977613" "5977615" "5977630" "5981314" "6001671" "6025640" "6130115" "6130473" "6143981" "6198171" "6225146" "6229200" "6242281" "6281568").PN. OR ("6455356").URPN. | US-PGPUB; USPAT; USOCR | OR | ON | 2006/10/23 13:55 |
| S3 | 45 | ("5270491" "5529959" "5811799" "5898218" "6191359" "6208020" "6303978" "6355502").PN. OR ("6476469").URPN. | US-PGPUB; USPAT; USOCR | OR | ON | 2006/10/23 13:51 |
| S2 | 25 | ("20010030355" "20010042904" "20020041011" "20020079561" "20020121684" "20020153597" "20030001244" "20030006492" "20030042581" "20030073265" "4283839" "5466966" "6025640" "6075284" "6078098" "6081029" "6166430" "6211462" "6229200" "6448633" "6455356" "6462424" "6476469" "6521987" "6700186"). PN. OR ("6979886").URPN. | US-PGPUB; USPAT; USOCR | OR | ON | 2006/10/23 13:49 |
| S1 | 11 | ("0127711" "6504238" "6828661" "6 900524" "6979886").PN. | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2006/10/23 13:48 |